CLAIM AMENDMENTS

Please cancel claims 14-25 and 41-42 without prejudice.

Please amend the following claims by inserting the underlined material and deleting the bracketed material:

1. (original): A method for identifying compounds that modulate a target protein, comprising:

providing cells transfected in such a way as to provide a polynucleotide sequence encoding said target under control of a heterologous inducible promoter;

inducing the promoter under conditions that provide a detectable change in a measurable parameter associated with the cells;

contacting at least a portion of the cells with a test compound to ascertain whether the test compound affects a change in the measurable parameter; and

repeating the contacting step with at least one other test compound.

2. (original): The method of Claim 1, wherein the measurable parameter is a parameter other than growth or survival.

3. (original): The method of Claim 1, wherein the contacting step comprises contacting cells with said test compound while the promoter is induced.

4. (original): The method of Claim 1, further comprising comparing the value of the measurable parameter in uninduced cells with the value of the parameter in induced cells.

5. (original): The method of Claim 4, wherein the measurable parameter has been selected from among a plurality of candidate parameters based on said comparison.

6. (original): The method of Claim 1, wherein the promoter is induced to a degree that provides a detectable change in the parameter but not to a degree that kills the cell.

7. (original): The method of Claim 1, wherein the promoter is induced by contacting the cell with an inducer molecule.

8. (original): The method of Claim 1, wherein the promoter is induced by removal or inhibition of a repressor.

9. (original): The method of Claim 1, wherein the target protein affects ion channel activity of the cell.

10. (original): The method of Claim 9, wherein the target protein is an ion channel protein.

11. (original): The method of Claim 9, further comprising:

identifying at least one test compound that modulates the measurable parameter in the cell;

providing a second cell line that differs from the first cell line in that the inducible promoter controls expression of a reporter instead of polynucleotide encoding target;

contacting the second cell line with the identified test compound; and

ascertaining whether the identified test compound affects the expression of the reporter.

12. (original): The method of Claim 1, wherein said polynucleotide encoding target and said promoter have been transfected into a mammalian cell.

13. (original): The method of Claim 1, wherein said inducible promoter replaces an endogenous promoter and controls the expression of an endogenous polynucleotide encoding target.

14.-25. (Cancelled)

26. (original): A method according to claim 25 wherein the step of obtaining a cell that conditionally expresses said membrane receptor comprises:

a. obtaining a cell that contains an endogenous target membrane receptor sequence and an endogenous noncoding sequence; and

b. inserting an inducible cassette comprising a 5' insertion adapter, a regulatory sequence and a 3' insertion adapter within said endogenous noncoding sequence such that said regulatory sequence is operably linked such that it is able to modulate transcription of said target membrane receptor by the presence or absence of a regulator.

27. (original): A method according to claim 26 wherein said regulatory sequence is a non-mammalian enhancer sequence or a repressor sequence.

28. (original): A method according to claim 27 wherein said non-mammalian enhancer sequence is a herpes virus enhancer or an artificial enhancer.

29. (original): A method according to claim 28 wherein said non-mammalian enhancer sequence is an inducible promoter.

30. (original): A method according to claim 29 wherein said inducible promoter is a herpes virus promoter.

31. (original): A method according to claim 29 wherein said inducible cassette further comprises a target sequence such that said target sequence is transcribed upon induction of said inducible cassette.

32. (original): A method according to claim 31 wherein said target sequence is selected from the group consisting of a G-protein coupled receptor target sequence, a nuclear hormone receptor target sequence, a cytokine receptor target sequence, a protein kinase-coupled receptor target sequence a nicotinic acetylcholine receptor target sequence, a ionotropic glutamate receptor target sequence, a glycine receptor target sequence, a gamma-aminobutyric acid receptor target sequence, and a vanilloid receptor target sequence.

33. (original): A method according to claim 32 wherein said target sequence is 5HT4.

34. (original): A method according to claim 27 wherein said repressor sequence is able to bind a zinc finger protein.

35. (original): A method according to claim 34 wherein said zinc finger protein comprises a KRAB domain.

36. (original): A method according to claim 26 wherein said regulator is VP16 or a functional domain of VP16.

37. (original): A method according to Claim 25 further comprising transfecting said cell with a regulatory expression vector construct comprising a second inducible promoter and a regulator gene encoding said regulator operably linked such that induction of said second inducible promoter by an exogenous stimulus initiates transcription of said regulator gene.

38. (original): A method according to claim 37 wherein said second inducible promoter is a tetracycline inducible promoter or an ecdysone-inducible promoter.

39. (original): A method according to claim 37 wherein said exogenous stimulus is tetracycline, ponasterone, dexamethasone, a heavy metal ion or heat.

40. (original): A method according to claim 25 wherein said step of inducing expression of said target membrane receptor is initiated by the presence or absence or a regulator or by the presence or absence of an inducer.

41-42. (cancelled).